

Rejections Under Section 103

In General, the Claim Amendment

Page 2 of the specification, lines 6 through 25, discusses a point and purpose of the instant invention. Pumps chosen for use in an around-the-pump system for industrial fire fighting (especially 2000 gpm and greater pumps) are chosen from those designed with a special, small inlet or port on their suction side, which port or inlet can be and is used to support the around-the-pump system. This inlet is typically a 2½ inch port and is sometimes referred to as a pony inlet or port or an auxiliary inlet or port. The main manifold inlet(s) for 2000 gpm or greater pumps are typically structured for 6 inch lines.

Pumps manufactured with the special, approximately 2½ inch auxiliary inlet place that auxiliary inlet on the water manifold inlet or just downstream of the water manifold inlet (which is sometimes called the suction inlet.) There are good engineering reasons for doing so, discussed below.

Industrial fire fighters, are accustomed to work with 2000 gpm and greater pumps structured with that small, special suction side inlet or port. Thereby, they operate their around-the-pump system. If such pump is not available at the site of an emergency, a suitable pump is located and brought in. (This policy is followed, the instant inventor discovers, even when a 2000 gpm or greater pump is available; it just does not have the auxiliary inlet.)

Thus, current practice, or the practice of the prior art, is not to use a pump if it is not specially fitted with the 2½ inch suction side inlet for operating the around-the-pump system. The fire fighters wait until they have secured or brought in or borrowed an appropriate pump. The instant inventor, however, is focused on getting foam on the fire. (The instant inventor also innovates with equipment.) Pump manufacturers are interested in engineering, designing and producing the most cost effective, efficient and reliable structure. It is not surprising that pump manufacturers would have little interest in the present invention. Fire fighters, to date, have simply not come up with it either.

The present invention teaches that if a 2000 gpm or greater pump is present with the requisite water manifold inlets, even though it is without a special, approximately 2½ inch

auxiliary inlet, use that pump. A suitable “fitting,” assuming one has the foresight to have created it and brought it along, placed upstream of the water manifold inlet will suffice. This fitting will suffice in the firefighting scenario to provide a sufficient auxiliary inlet such that the existing pump can be utilized immediately in an around-the-pump system. It may not be optimal, but it works. It saves time. It gets foam to the fire. Waiting could be costly and is unnecessary. For such an emergency the fire fighter can carry with him/her a “fitting” that adequately substitutes, under the circumstances, for the special, small suction side inlet structured on or just downstream of the water manifold inlet in a 2000 gpm or greater pump. Experiment has shown the value of the fitting and that it works.

Independent claims 1, 9, 16 and 17 have been amended herein for clarification to specify a standard pump “having a water manifold inlet but no special, approximately 2½ inch inlet.” By choosing these words applicant has attempted to use words found in the paragraphs on page 2 of the specification. Applicant also more clearly distinguishes the instant invention from Hollan and Gagliano.

Rejection over Hollan

Hollan teaches exactly what the prior art teaches, namely, using a pump structured to have built in a special, small auxiliary (or pony) inlet, associated with the water manifold inlet, useful for running an around-the-pump system. (By the way, the pony inlet also has other uses.)

The Examiner recites that it would have been obvious to provide Hollan’s “fitting at 29” upstream of the water manifold inlet, and that Hollan’s “fitting at 29” could be so located without affecting the operation of the Hollan apparatus. Applicant respectfully traverses. (1) Hollan has no specific “fitting at 29.” (2) There is no motivation to relocate such item, to the extent relocation of the item from Hollan’s pump is imaginable. There are good engineering reasons not to. (3) And the operation would be affected. It is part of applicant’s invention that his system “works” and the benefit of saving time outweighs the loss of effectiveness.

Engineering reasons for placing an auxiliary inlet at the water inlet manifold or just at its downstream end when constructing a pump include: (1) the pressure at the auxiliary inlet is more predictable and reliable; (2) the distance the additive must flow before reaching the pump chamber

is less, which is a benefit with many additives; (3) humans usually attend pumps during operation and thus can be expected to check on inlet pressures to make sure they stay within bounds; (4) such location satisfies the other uses of the pump inlet. When constructing a pump, the Examiner points to no motivation for providing applicant's "fitting" upstream, and there is none. The Examiner further points to no evidence from "fire fighters" (as opposed to pump engineers) that applicant's system produces a net benefit. The teaching or suggestion that the Examiner fails to supply would require finding that someone experimented with pumps in order to create a successful ad hoc around-the-pump system using an existing pump without an auxiliary inlet.

Applicant teaches not only the motivation but the solution. (Applicant does not teach, for instance, a solution of creating an auxiliary inlet at the preferred location on the pump suction inlet manifold by a "web tap." Creating a "wet tap" at the emergency site might be cost effective. Applicant simply has not experimented with that and has no evidence. What applicant has experimented with and does teach is the use of a "fitting," upstream of the water manifold inlet. Perhaps it is not optimally located, in theory, but applicant's experience has shown that it can be sufficient to work and to yield a net benefit. Hollan does not teach or suggest any such method or apparatus. For that reason all claims are allowable over Hollan and the combination of references, without more.

Rejection of Claims 1, 2, 5, 6, 8, 9, 13 and 15-17 under Section 103(a) as Unpatentable Over Gagliardo in View of Williams.

Applicant respectfully traverses the Examiner's rejection. Gagliardo does not teach or suggest "a fitting at connection of line 10 at 13." Gagliardo in fact does not teach "a standard pump having a water manifold inlet but no special, approximately 2½ inch inlet." Gagliardo implies the opposite.

Gagliardo's Figure 1 is "a schematic view" of a proportioning system. The proportioner itself, element 25, is the subject of Figures 2, 3 and 4 and is the subject of the invention. The system is schematically indicated to provide context for the inventive proportioner. No "fitting" is taught by Gagliardo "at conjunction of line 10 at 13." Moreover, it is the proportioning system itself that is indicated by the reference numeral 10, not any "line."

As opposed to the Examiner's assertion, column 2 lines 53-58 teaches, "The pump has an inlet 12 that is connected to a source 13 of primary fluid: in the preferred embodiment, the primary fluid is water for use in extinguishing a fire. The pump has an outlet 14 connected to distribution elements 15, 16, 17, 18, 19 and 21." In column 1, lines 29 through 31, Gagliardo teaches, "For that reason, it is common practice to have a branch circuit flowing from the outlet of the pump to the inlet of the pump and to place the eductor in that branch circuit which contains a small amount of primary fluid." Column 2, lines 63-64, specifically states, "A re-circulation branch 22 joins the outlet 14 of the pump to the inlet 12." Gagliardo's independent claims recite in the preamble, "Proportioning system including a pump whose inlet is connected to a source of primary fluid and whose outlet is connected to a plurality of distribution elements and including a re-circulation branch joining the outlet to the inlet and having a source of secondary fluid, comprising:" As further illustration that the lines of Gagliardo's Figure 1 are "schematic", and not to be interpreted verbatim, note that element 13 is indicated in the drawing as a line but is recited in the text as "a source of primary fluid."

Thus, Gagliardo like Hollan teaches the prior art system, as discussed in the instant specification. That is, Gagliardo teaches an around-the-pump system that includes a re-circulation branch joining the pump outlet 14 to the pump inlet 12, as specifically recited in the text.

Gagliardo contains no teaching or suggestion of any approach to utilize with a pump that is not structured to permit joining of a re-circulation branch to the inlet of the pump.

To read Gagliardo as teaching a "fitting" is to read Gagliardo influenced by the teaching of the present invention and the disclosure provided by the instant application.

For the above reasons Gagliardo does not teach or suggest the limitations of the independent claims. For that reason all rejected claims are allowable without more.


Reconsideration and further examination is respectfully requested.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Sue Z. Shaper, Applicants' Attorney at 713 550 5710 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date


Sue Z. Shaper
Attorney/Agent for Applicant(s)
Reg. No. 31663

Sue Z. Shaper
1800 West Loop South, Suite 1450
Houston, Texas 77027
Tel. 713 550 5710

sp/gc